

# INSTALLATION INSTRUCTIONS

## VGSU SERIES BUILT-IN GAS COOKTOPS

VIKING RANGE CORPORATION  
111 Front Street  
Greenwood, Mississippi 38930 USA  
(662) 455-1200



### IMPORTANT: PLEASE READ AND FOLLOW

1. Before beginning, please read these instructions completely and carefully.
2. Do not remove permanently affixed labels, warnings, or plates from product. This may void the warranty.
3. Please observe all local and national codes and ordinances.
4. Please ensure that this product is properly grounded.
5. **The installer should leave these instructions with the consumer who should retain for local inspector's use and for future reference.**

Installation must conform with local codes or, in the absence of codes, the National Fuel Gas Code, ANSI Z223.1 or the latest edition. In CANADA: Installation must be in accordance with the current CAN/CGA B149.1 & 2 Gas Installation codes and/or local codes. Electrical installation must be in accordance with the current CSAC22.1 Canadian Electrical Codes Part 1 and/or local codes.

Installation of any gas-fired equipment should be made by a licensed plumber. A manual gas shut-off valve must be installed in the gas supply line ahead of the cooktop in the gas stream for safety and ease of service.

**In Massachusetts:** All gas products must be installed by a "Massachusetts" licensed plumber or gasfitter. A "T" handle type manual gas valve must be installed in the gas supply line to the appliance.

**WARNING: IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.**

1. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
2. **WHAT TO DO IF YOU SMELL GAS:**
  - Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone.
  - Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
3. Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

### WARNING

If not installed, operated and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or from fuel combustion which can cause death or serious illness and which are known to cause cancer, birth defects, or other reproductive harm.

For example, benzene is a chemical which is part of the gas supplied to the cooking product. It is consumed in the flame during combustion. However exposure to a small amount of benzene is possible if a gas leak occurs. Formaldehyde and soot are by-products of incomplete combustion. Properly adjusted burners with a bluish rather than yellow flame will minimize incomplete combustion.

## BASIC SPECIFICATIONS

DESCRIPTION	30" W. MODEL	36" W. MODEL
Cutout Width - Minimum	26 3/4" (67.9 cm)	34 3/8" (87.3 cm)
Maximum	29 7/8" (75.9 cm)	35 7/8" (91.1 cm)
Cutout Height - Minimum	2 3/8" (6.0 cm)	
Cutout Depth - Minimum	18 5/8" (47.3 cm)	
Maximum	20 1/8" (51.1 cm)	
Overall Width	30 3/4" (78.1 cm)	36 3/4" (93.3 cm)
Overall Height from Bottom	4 3/16" (10.5 cm)	
Overall Depth from Rear	21" (53.3 cm)	
Gas Requirements	To field convert from natural to LP/Propane, the orifice spuds and regulator must be physically changed. Order accessory kit (LPK2-VGSU). Accepts standard residential 1/2" (1.3 cm) I.D. gas service line.	
Electrical Requirements	120 VAC/60 Hz; 4 ft. (121.9 cm), 3-wire cord with grounded 3-prong plug attached to product.	
Maximum Amp Usage	2.0 amps	
Surface Burner Rating	Left Front- 14,000 Nat./13,500 LP (BTU) (4.1 Nat./4.0 LP [kw]) Left Rear- 12,000 Nat./11,000 LP (BTU) (3.5 Nat./2.8 LP [kw]) Right Rear- 9,100 Nat./LP (BTU) (2.6 Nat./LP [kw]) Right Front- 6,000 Nat./LP (BTU) (1.8 Nat./LP [kw])	Left Front- 14,000 Nat./13,500 LP (BTU) (4.1 Nat./4.0 LP [kw]) Left Rear, Center Front, and Center Rear - 12,000 Nat./11,000 LP (BTU) (3.5 Nat./2.8 LP [kw]) Right Rear- 9,100 Nat./LP (BTU) (2.6 Nat./LP [kw]) Right Front- 6,000 Nat./LP (BTU) (1.8 Nat./LP [kw])
Approximate Shipping Weight	67 lb. (30.2 kg.)	80 lb. (36.0 kg)

## GENERAL INFORMATION

- WARNING:** The use of cabinets for storage above the appliance may result in a potential burn hazard. Combustible items may ignite, metallic items may become hot and cause burns. If a cabinet storage is to be provided the risk can be reduced by installing a rangehood that projects horizontally a minimum of 5" (12.7 cm) beyond the bottom of the cabinets.
- WARNING:** This appliance shall not be used for space heating. This information is based on safety considerations.
- All openings in the wall behind the appliance and in the floor under the appliance shall be sealed.
- Keep appliance area clear and free from combustible materials, gasoline, and other flammable vapors.
- Do not obstruct the flow of combustion and ventilation air.
- Disconnect the electrical supply to the appliance before servicing.
- When removing cooktop for cleaning and/or service;
  - Shut off gas at main supply
  - Disconnect AC power supply
  - Disconnect gas line to the inlet pipe.
  - Lift appliance out of cabinet cutout.
- Electrical Requirement**  
Normal grounded household current, 120 volts, 60 Hz, 15 amps, single phase. Electrical installation should comply with national and local codes.
- Air Supply and Ventilation**  
Means must be provided for any heavy-duty cooking appliance to exhaust combustion waste product to the outside of the building. It is recommended that the cooktop be set under a powered, vented exhaust hood. A non-vented recirculating hood is not recommended. Nothing should obstruct the flow of combustion and ventilation air.
- Gas Manifold Pressure**  
Natural gas - 5.0" W.C.P.  
LP/Propane - 10.0" W.C.P.
- Flexible Connections**  
If the unit is to be installed with flexible couplings and/or quick disconnect fittings, the installer must use a flexible connector of at least 1/2" I.D. (1.3 cm) NPT with suitable strain reliefs and comply with ANSI Z21.41 and Z21.69 standards.

# WARNING!!

## ELECTRICAL GROUNDING INSTRUCTIONS

The cooktop must be electrically grounded in accordance with local codes or, in the absence of codes, with the ANSI/NFPA No. 70-latest edition. Installation should be made by a licensed electrician. This appliance is equipped with a three-prong grounding plug for your protection against shock hazard and should be plugged directly into a properly grounded receptacle. Do not cut or remove the grounding prong from the plug.

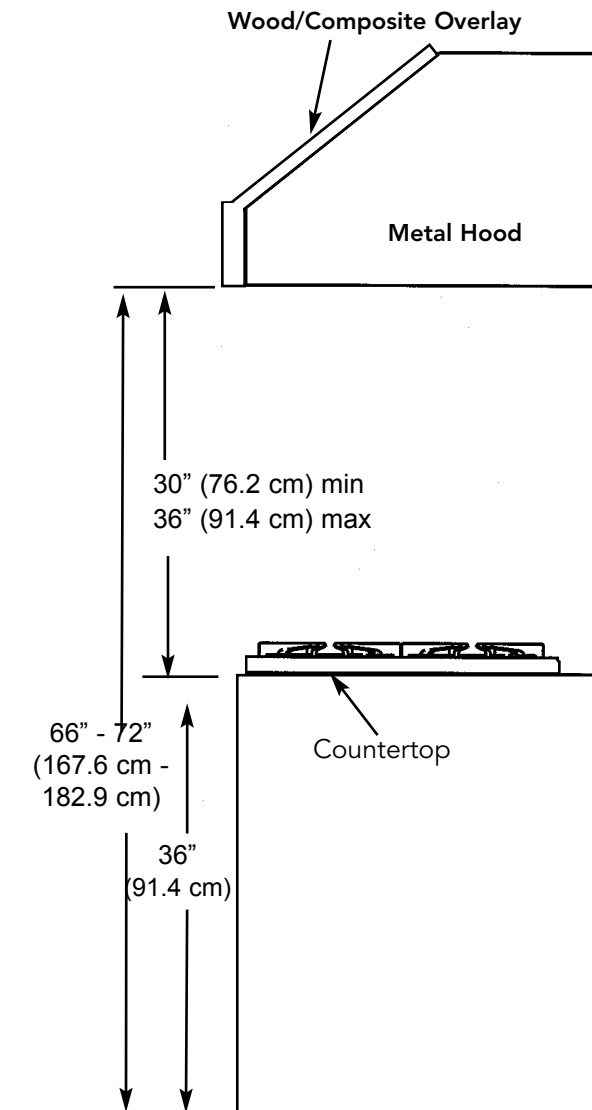
**For personal safety, this appliance must be properly grounded.**

**Do not under any circumstances  
cut or remove the third (ground) prong from the power plug.**

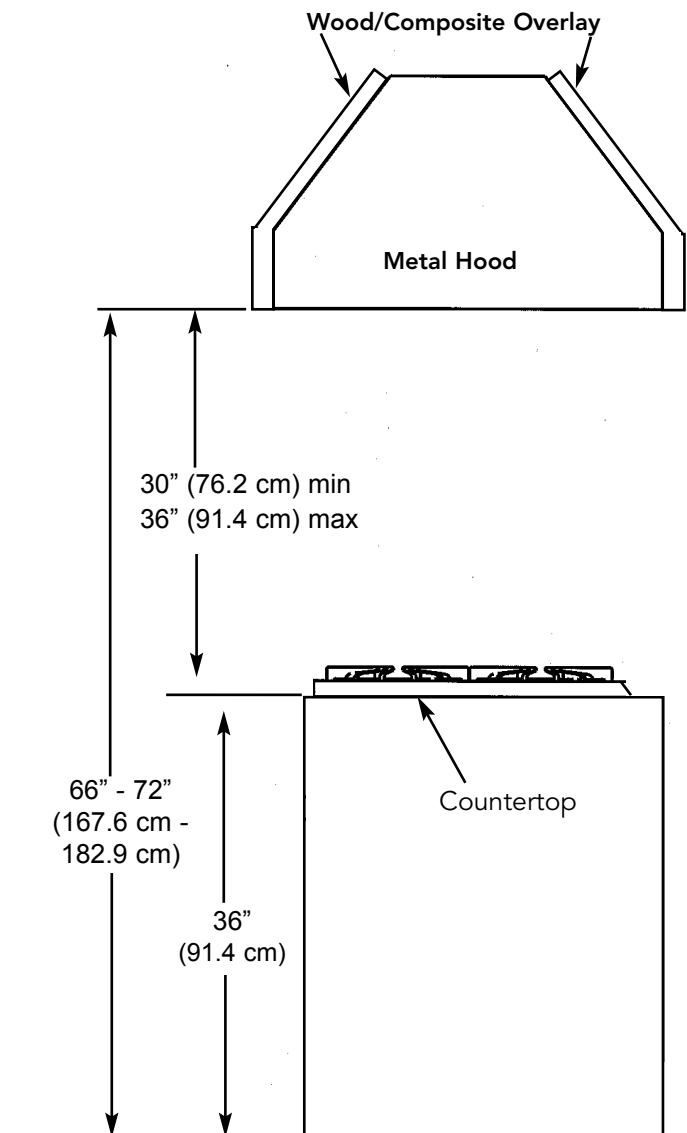
### WOOD/COMPOSITE OVERLAY INSTALLATION

The bottom of the hood should be 30" (76.2 cm) min. to 36" (91.4 cm) max. above the countertop. This would typically result in the bottom of the hood being 66" (167.6 cm) to 72" (182.9 cm) above the floor. Refer to the rangehood installation instructions for further information. These dimensions provide for safe and efficient operation of the hood.

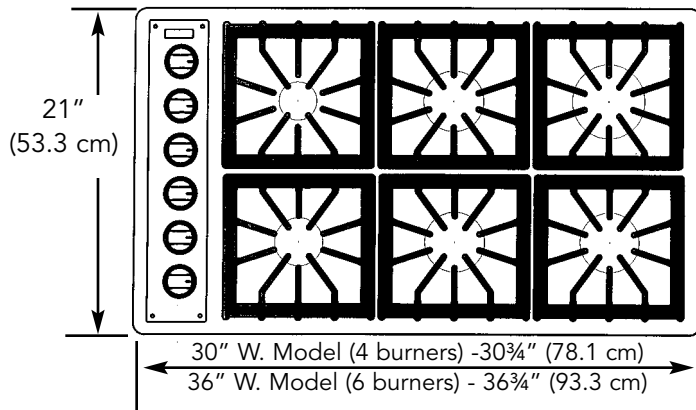
#### WALL INSTALLATION



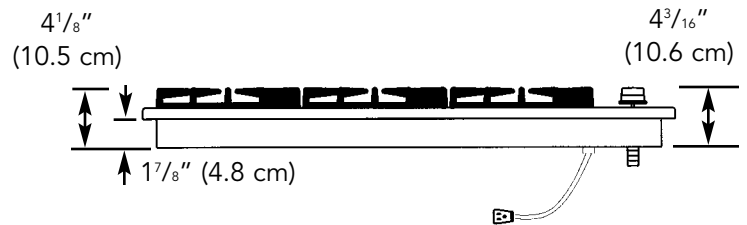
#### ISLAND INSTALLATION



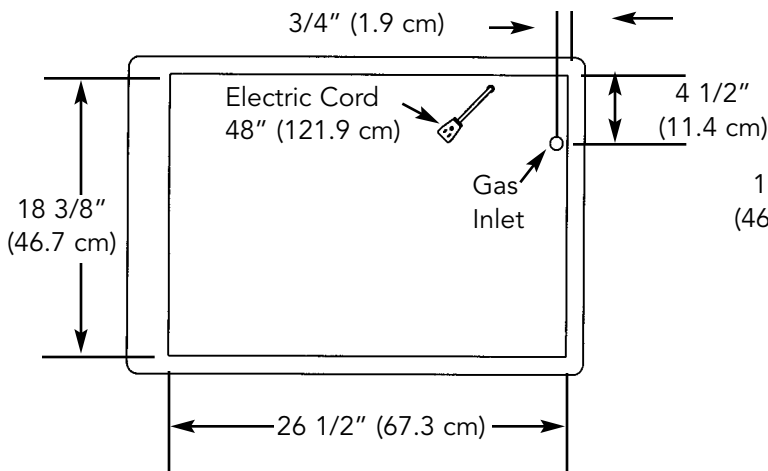
## TOP DIMENSIONS



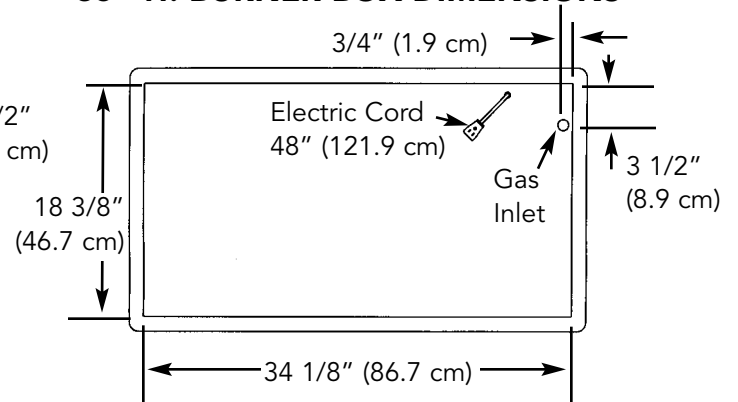
## HEIGHT DIMENSIONS



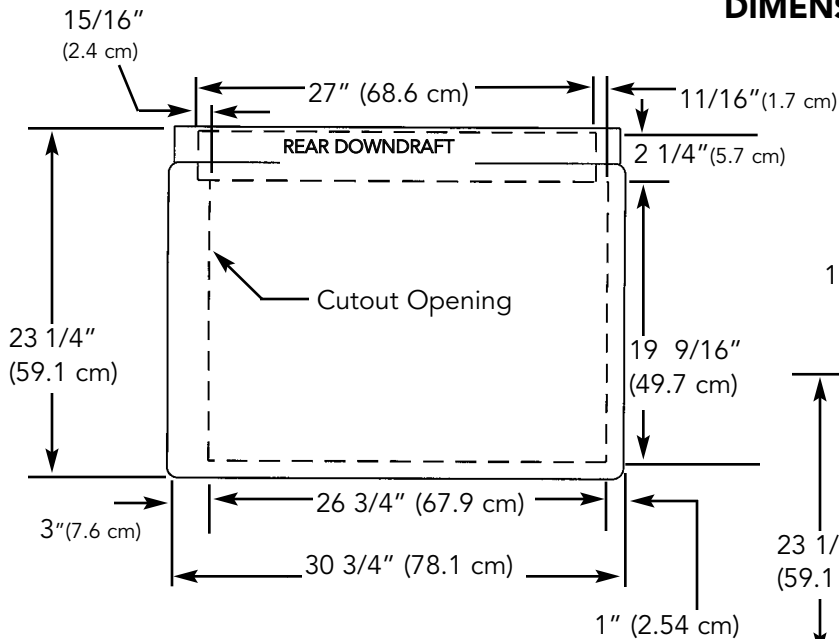
## 30" W. BURNER BOX DIMENSIONS



## 36" W. BURNER BOX DIMENSIONS

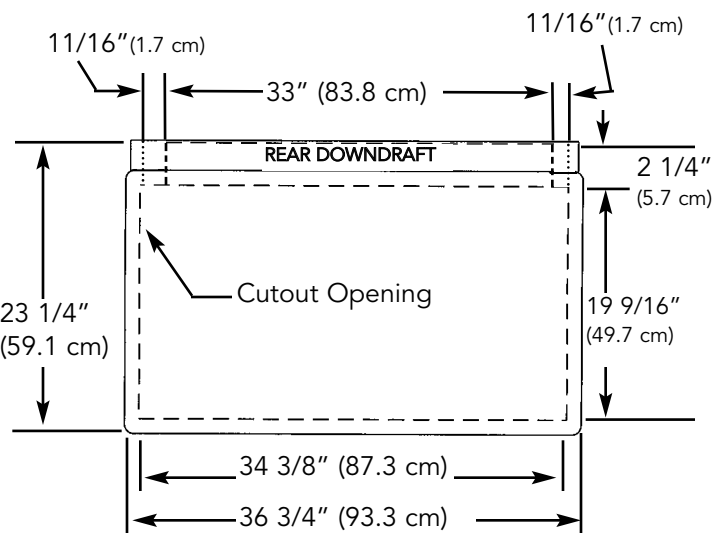


## COOKTOP AND COOKTOP/REAR DOWNDRAFT OVERALL AND MINIMUM CUTOUT DIMENSIONS



### 30" W. MODELS

Downdrafts: VIPR101/VIPR101R

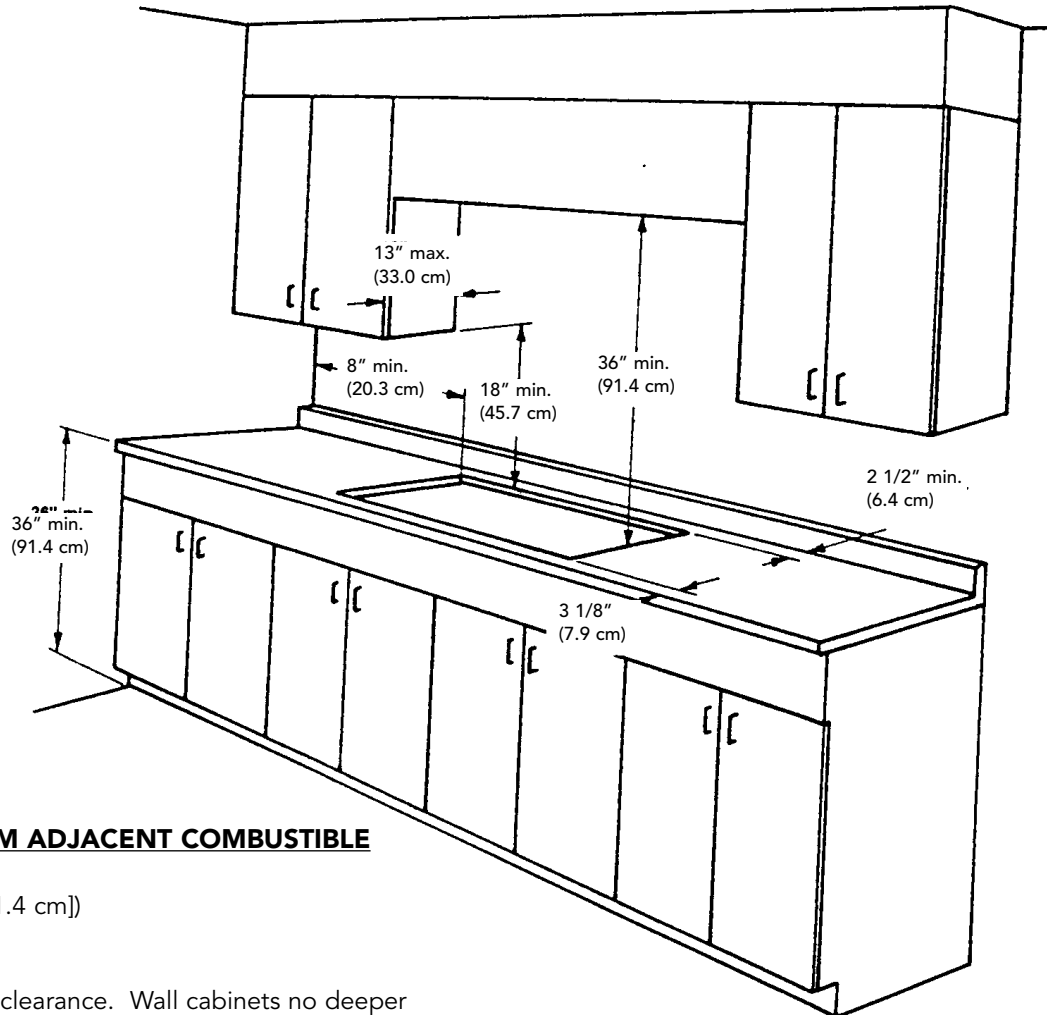


### 36" W. MODELS

Downdrafts: VIPR161/VIPR161R

## PROXIMITY TO SIDE CABINETS

1. The cooktop may be installed directly to existing base cabinets.
2. The cooktop CANNOT be installed directly adjacent to sidewalls, tall cabinets, tall appliances, or other side vertical surfaces above 36" (91.4 cm) high. There must be a minimum of 8" (20.3 cm) side clearance from the cooktop to such combustible surfaces above the 36" (91.4 cm) counter height.
3. Within the 8" (20.3 cm) side clearance to combustible vertical surfaces above 36" (91.4 cm), the maximum wall cabinet depth must be 13" (33.0 cm) and wall cabinets within this 8" (20.3 cm) side clearance must be 18" (45.7 cm) above the 36" (91.4 cm) high countertop.
4. Wall cabinet above the cooktop must be a minimum of 36" (91.4 cm) above the countertop for a full width of the cooktop. This minimum requirement does not apply if a rangehood is installed over the cooking surfac.
5. A 120 volt wall receptacle should be located approximately 6" (15.2 cm) below the countertop cutout and 12" (30.5 cm) from the right side of the cutout.

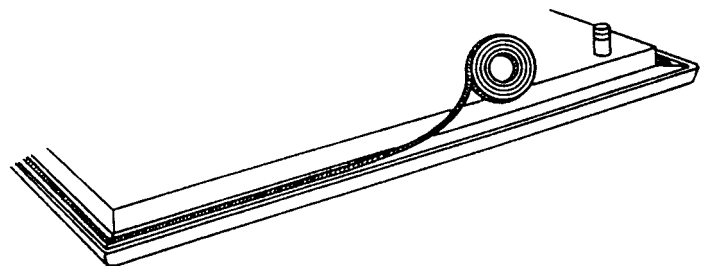


## MINIMUM CLEARANCES FROM ADJACENT COMBUSTIBLE CONSTRUCTION

- Above countertop (above 36" [91.4 cm])
  - Sides 8" (20.3 cm)
  - Rear 2 1/2" (6.4 cm)
  - Within 8" (20.3 cm) side clearance. Wall cabinets no deeper than 13" (33.0 cm)
  - Must be minimum 18" (45.7 cm) above countertop
  - Wall cabinets directly above the product must be minimum 36" (91.4 cm) above the countertop.

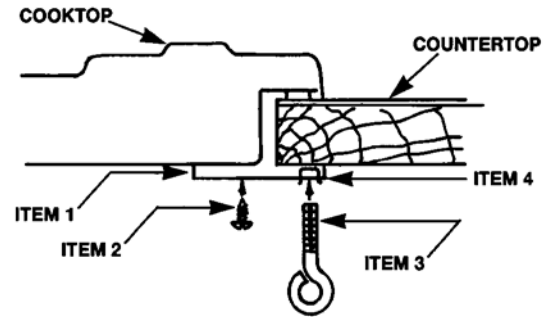
## INSTALLATION OF COOKTOP

1. Remove the roll of gasket material from your packed-with items.
2. Turn your cooktop upside down on a flat surface. Make sure to place some protective material between the cooktop and the surface.
3. Peel the plastic covering from the gasket material.
4. With the adhesive side down, stick the gasket material all the way around the burner flange. **IMPORTANT:** Make sure the corners are covered completely, leaving **no air gaps**.
5. Turn the cooktop over and place into the countertop cutout.



## INSTALLATION OF HOLD DOWN BRACKET

1. After installation of the cooktop, locate the two sheet metal screw holes on each end of the bottom of the burner box. Screw hold down brackets (Item 1) using the #10 x 1/2" sheet metal screw (Item 2) to the burner box.
2. Screw the eye bolt (Item 3) into the self-retaining nut (Item 4) and tighten firmly against bottom of countertop.



## GAS CONNECTION

The gas supply (service) line must be the same size or greater than the inlet line of the appliance. All cooktops use a 1/2" (1.3 cm) I.D. NPT (Sch40) inlet. Sealant on all pipe joints must be resistive to LP/Propane gas.

### 1. Manual shut-off valve:

The installer-supplied valve must be installed in the gas service line ahead of the appliance and regulator in the gas stream and in a position where it can be reached quickly in the event of an emergency. **In Massachusetts:** A "T" handle type manual gas valve must be installed in the gas supply line to the appliance.

### 2. Pressure regulator:

- a) All heavy-duty, commercial-type cooking equipment must have a pressure regulator on the incoming service line for safe and efficient operation, since service pressure may fluctuate with local demand. The regulator supplied with this cooktop must be installed before any gas connections are made.
- b) Any conversions required must be performed by your dealer or a qualified licensed plumber or gas service company. Please provide the service person with these manuals before the work is started on the cooktop. (Gas conversions are the responsibility of the dealer or end user). **NOTE:** This cooktop is shipped from the factory with fixed orifices, jets and fixed regulator. If you have ordered a natural gas cooktop and want to convert to LP/Propane, you will need to order a conversion kit (LPK2-VGSU). See LP/Propane conversion in this manual to convert to LP/Propane.
- c) Manifold pressure should be checked with a manometer; natural gas requires 5.0" WCP and LP/Propane requires 10.0" WCP. Incoming line pressure upstream for the regulator must be 1" WCP higher than the manifold pressure in order to check the regulator. The regulator used on this cooktop can withstand a maximum input pressure of 1/2 PSI (14.0" WCP). If the line pressure is in excess of that amount, a step-down regulator will be required.
- d) The appliance, its individual shut-off valve, and pressure regulator must be disconnected from the gas supply piping system during any pressure testing of that system at pressures in excess of 1/2 PSI (3.45kPa).
- e) The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSI (3.45kPa).

### 3. Rigid Connections:

- a) Incoming gas is brought from an intake pipe (not supplied) at the rear of the unit to the pressure regulator; then to the manifold pipe for distribution. The only connection necessary is from the service supply, through the shut-off valve (not supplied), to this intake pipe (not supplied) to the regulator supplied, but not connected through the cooktop. **In Massachusetts:** This appliance must be installed with a 36" (3-foot) long flexible gas connector.
- b) Double-check any installer-supplied intake pipes visually and/or blow them out with compressed air to clear any dirt particles, threading chips, or other foreign matter before installing in a service line. Those particles will clog orifices when gas pressure is applied.
- c) Check the gas supply and the regulator for the proper supply of gas. A properly adjusted burner should be stable and quiet. The flame should have a sharp, well defined blue inner cone with no yellow tipping. The flame should also be stable and uniform with no flames lifting off the burner ports.

**CAUTION:** Before placing the cooktop into operation, always check for gas leaks with a soapy water solution or other acceptable method. **DO NOT USE AN OPEN FLAME TO CHECK FOR LEAKS!**

## BURNER ADJUSTMENTS

### To gain access to the surface burner adjustments:

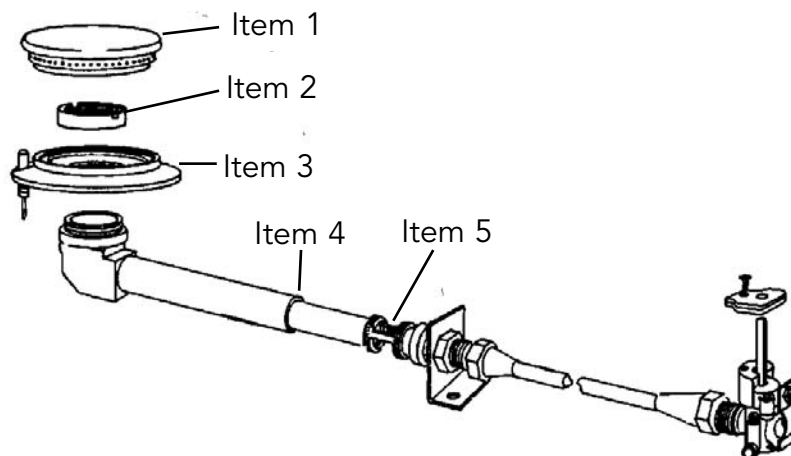
1. **Caution:** Before proceeding with the conversion, turn off gas supply to the appliance prior to disconnecting the electrical power.
2. Disconnect electrical power to cooktop
3. Remove the surface grates.
4. Remove the burner caps (Item 1) by lifting up.
5. Using a large screwdriver or flat piece of metal, turn the brass ring (Item 2) in the center of each burner counter clockwise, then remove.
6. Use caution when lifting the top as the ignition assemblies (Item 3) are not attached to the top assembly and will fall out causing a possible breakage of the igniter.
7. With caution, lift front edge of cooktop to approximately 12" for working space.
8. Screw burner venturi (Item 4) counter clockwise until it is completely off of the burner orifice spud (Item 5).
9. With a proper flame height, adjust the air shutter to obtain a blue flame with no yellow tipping that sits on the burner at the burner port.
  - (a) open the air shutter gap to eliminate yellow tipping.
  - (b) close the air shutter gap to prevent a noisy flame that lifts off the burner.

### IMPORTANT - Conditions that cause odors:

1. Floating flames are lazy looking and do not have well defined cones. They are long, ill-defined, quiet flames that sometimes lift completely off the ports and cause a strong and pungent odor.
  2. Lifting flames are well defined, hard and noisy that lift completely off the ports.
  3. An orifice that is out of line with the burner venturi.
10. After adjusting the air shutters, reverse steps 1-7 to return the cooktop to working condition.

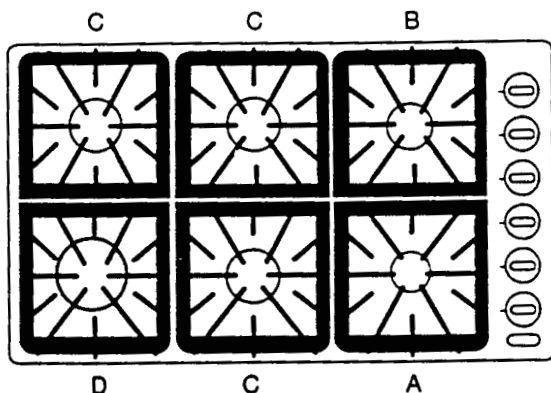
## LP/PROPANE CONVERSION

1. **Caution:** Before proceeding with the conversion, turn off gas supply to the appliance prior to disconnecting the electrical power.
2. Disconnect electrical power to cooktop
3. Remove the surface grates.
4. Remove the burner caps (Item 1) by lifting up.
5. Using a large screwdriver or flat piece of metal, turn the brass ring (Item 2) in the center of each burner counter clockwise, then remove.
6. Use caution when lifting the top as the ignition assemblies (Item 3) are not attached to the top assembly and will fall out causing a possible breakage of the igniter.
7. With caution, lift front edge of cooktop to approximately 12" for working space.
8. Screw burner venturi (Item 4) counter clockwise until it is completely off of the burner orifice spud (Item 5).
9. Remove the natural gas orifice spud (Item 5). Replace with LP orifice spud as indicated in Diag. B. Save the natural gas orifice spud removed from this appliance for future use.
10. After establishing the LP/Propane gas supply to the cooktop, it will be necessary to adjust the air shutters on all burners (See **BURNER ADJUSTMENTS** - #9).
11. Make sure you change the regulator to the LP/Propane regulator supplied with the conversion kit. All cooktops use a 1/2" I.D. NPT inlet. Sealant on all pipe joints must be resistive to LP/Propane gas.



**Diag. A**

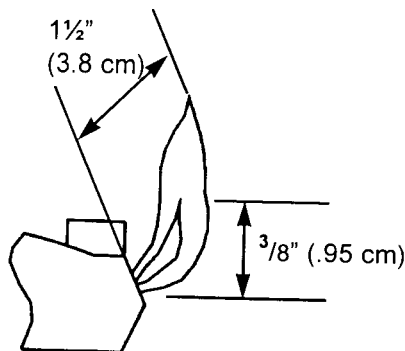
Diag. B



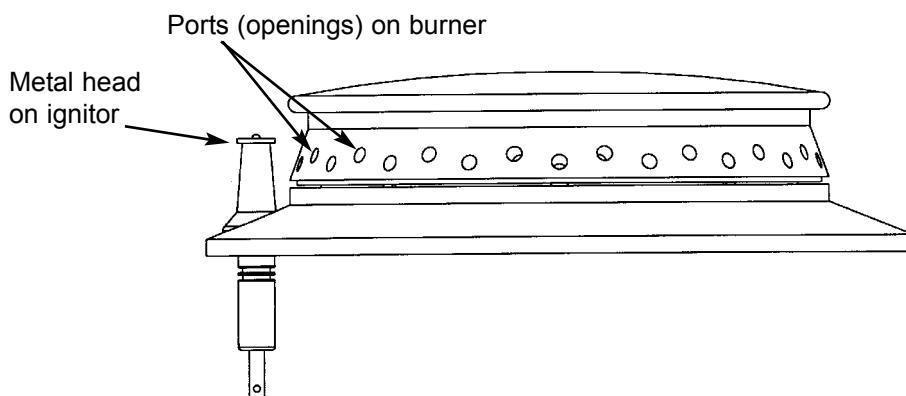
	A	B	C	D
LP Orifice Size	#69	#65	#60	#59

\*For 30" W. Cooktop - disregard center burner section.

### Flame Height



### Ignitor to Burner Adjustment



## ELECTRICAL CONNECTION

There is no connection necessary beyond plugging the unit into a polarized, grounded, 120 volt, 60 Hz, 15 amp circuit. The minimum of 102VAC is required for proper operation of gas ignition systems. Do not use a GFI circuit. This circuit, however, **MUST** be grounded and properly polarized. The unit is equipped with 16-3 SPT2 power cord, and if an extension is required, it must be of at least this gauge. **NOTE:** If electrical power is not supplied or is interrupted, the open top burners will have to be lit manually with a match.

## PROPER LIGHTING AND SHUTDOWN INSTRUCTIONS

1. To ignite the surface burners, turn the knob counter clockwise to any position.
2. Upon ignition of the surface burner, turn the knob to the desired position, (HI, Med, or Low).
3. To shutdown the burner, turn knob clockwise to the OFF position.
4. In case of failure, shut the gas OFF using the installer supplied manual shut-off valve.

## INITIAL IGNITION OF BURNERS

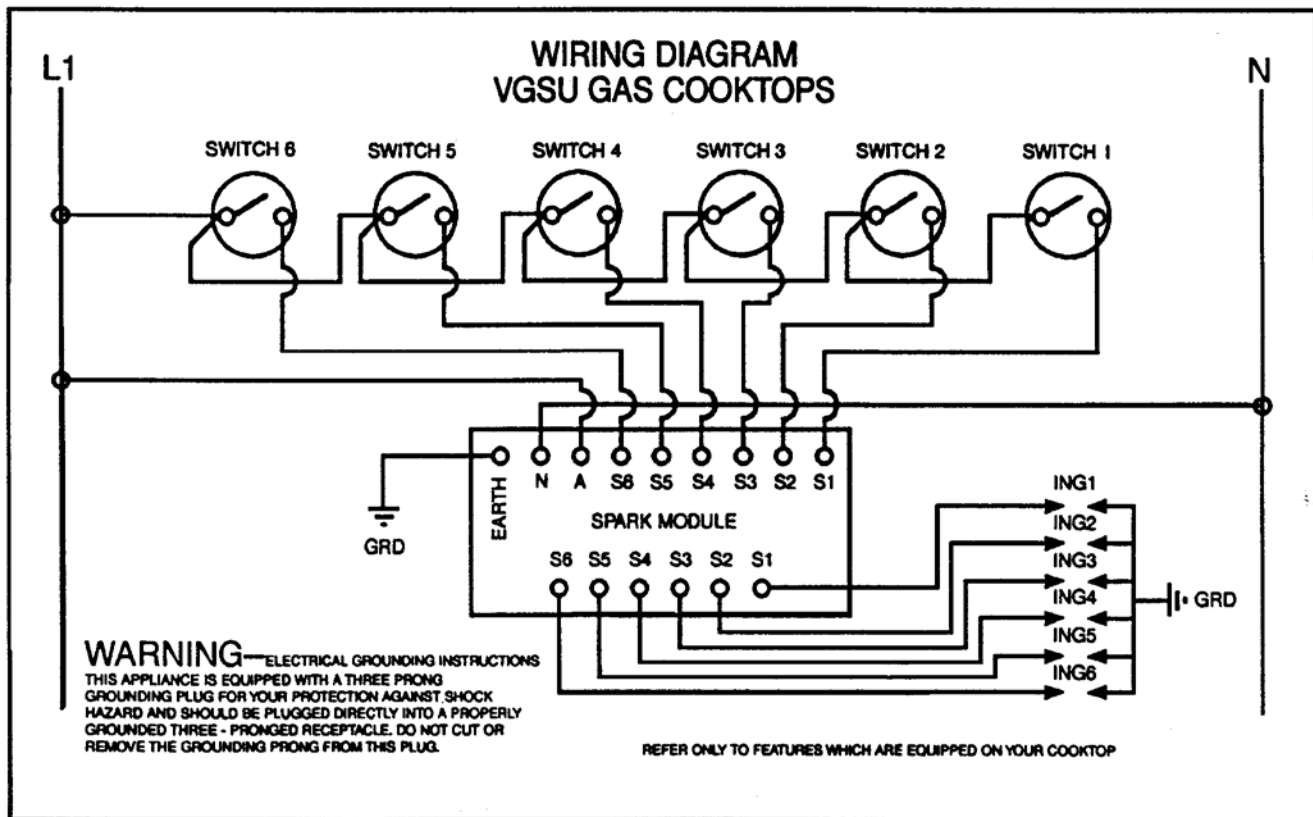
All cooktops are tested before leaving the factory. Field adjustments may be necessary for proper mixture of gas and air for proper operation. When the cooktop is connected to gas and electrical service, it should be adjusted by a qualified technician. If it is not, contact your dealer for the name of their authorized service agency in your area. Gas conversions and initial installation adjustments are not the responsibility of the manufacturer.

## FINAL PREPARATION

- a) New units are cleaned at the factory to remove any visible signs of dirt, oil, grease, etc. remaining from the manufacturing process. Some stainless steel parts may have a plastic protective wrapper which must be peeled off. The cooktop should be washed thoroughly with hot, soapy water and then rinsed and wiped dry to remove these film residues and any installation dust or debris before being used for food preparation.
- b) All stainless steel body parts should be wiped regularly with hot, soapy water and with a liquid cleanser designed for this material if build-up occurs. **DO NOT USE** steel wool, abrasive cloths, cleansers, or powders! If it is necessary to scrape stainless steel to remove encrusted material, soak with hot, wet cloths to loosen the material, then use a wood or nylon scraper. **DO NOT USE** a metal knife, spatula, or any other metal tool to scrape stainless steel! Scratches are almost impossible to remove.

## REPLACEMENT PARTS

Only authorized replacement parts may be used in performing service on the cooktop. Replacement parts are available from factory authorized parts distributors. Contact Viking Range Corporation- Preferred Service at (888) 845-4641 for the nearest parts distributor in your area.



Viking Range Corporation  
111 Front Street • Greenwood, Mississippi 38930 USA • (662) 455-1200  
For more product information, call 1-888-VIKING1 (845-4641), or visit the Viking web site at  
<http://www.vikingrange.com>